

WHAT IS CLAIMED IS:

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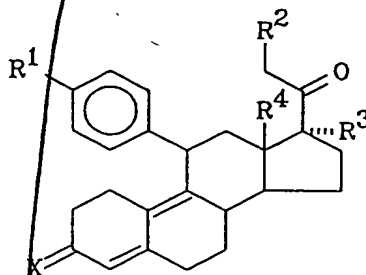
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1. A compound having the formula



in which:

$R^1$  is a member selected from the group consisting of  $-\text{OCH}_3$ ,  $-\text{SCH}_3$ ,  $-\text{N}(\text{CH}_3)_2$ ,  $-\text{NHCH}_3$ ,  $-\text{CHO}$ ,  $-\text{COCH}_3$  and  $-\text{CHOHCH}_3$ ;

$R^2$  is a member selected from the group consisting of halogen, alkyl, acyl, hydroxy, alkoxy, acyloxy, alkylcarbonate, cypionyloxy, S-alkyl and S-acyl;

$R^3$  is a member selected from the group consisting of alkyl, hydroxy, alkoxy and acyloxy;

$R^4$  is a member selected from the group consisting of hydrogen and alkyl; and

X is a member selected from the group consisting of  $=\text{O}$  and

$=\text{N}-\text{OR}^5$ , wherein  $R^5$  is a member selected from the group

consisting of hydrogen and alkyl.

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2. A compound in accordance with claim 1 in which:

$R^1$  is  $-\text{N}(\text{CH}_3)_2$ .

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3. A compound in accordance with claim 1 in which:

$R^2$  is halogen.

1 4. A compound in accordance with claim 1 in which:  
2 R<sup>2</sup> is alkoxy.

1 5. A compound in accordance with claim 1 in which:  
2 R<sup>3</sup> is acyloxy.

1 6. A compound in accordance with claim 1 in which:  
2 R<sup>4</sup> is alkyl.

1 7. A compound in accordance with claim 1 in which:  
2 X is  $=O$ .

1 8. A compound in accordance with claim 1 in which:  
2 X is  $=N-OR^5$ .

1 9. A compound in accordance with claim 1 in which:  
2 R<sup>1</sup> is  $-N(CH_3)_2$ ;  
3 R<sup>2</sup> is halogen;  
4 R<sup>3</sup> is acyloxy;  
5 R<sup>4</sup> is alkyl; and  
6 X is  $=O$ .

1 10. A compound in accordance with claim 9 in which:  
2 R<sup>2</sup> is F.

1 11. A compound in accordance with claim 9 in which:  
2 R<sup>2</sup> is Br.

1 12. A compound in accordance with claim 9 in which:  
2 R<sup>2</sup> is Cl.

1 13. A compound in accordance with claim 9 in which:  
2 R<sup>4</sup> is methyl.

1 14. A compound in accordance with claim 1 in which:  
2 R<sup>1</sup> is —N(CH<sub>3</sub>)<sub>2</sub>;  
3 R<sup>2</sup> is alkyl;  
4 R<sup>3</sup> is acyloxy;  
5 R<sup>4</sup> is alkyl; and  
6 X is =O .

1 15. A compound in accordance with claim 1 in which:  
2 R<sup>1</sup> is —N(CH<sub>3</sub>)<sub>2</sub>;  
3 R<sup>2</sup> is alkoxy;  
4 R<sup>3</sup> is acyloxy;  
5 R<sup>4</sup> is alkyl; and  
6 X is =O .

1 16. A compound in accordance with claim 15 in which:  
2 R<sup>2</sup> is methoxy.

1 17. A compound in accordance with claim 15 in which:  
2 R<sup>2</sup> is ethoxy.

1 18. A compound in accordance with claim 15 in which:  
2 R<sup>3</sup> is acetoxy.

1 19. A compound in accordance with claim 1 in which:  
2 R<sup>1</sup> is —N(CH<sub>3</sub>)<sub>2</sub>;  
3 R<sup>2</sup> is hydroxy;  
4 R<sup>3</sup> is acyloxy;

5  $R^4$  is alkyl; and

6 X is  $=O$  .

1 20. A compound in accordance with claim 1 in which:

2  $R^1$  is  $-N(CH_3)_2$ ;

3  $R^2$  and  $R^3$  are both acyloxy;

4  $R^4$  is alkyl; and

5 X is  $=O$  .

1 21. A compound in accordance with claim 20 in which:

2  $R^2$  and  $R^3$  are both acetoxy.

1 22. A compound in accordance with claim 1 in which:

2  $R^1$  is  $-N(CH_3)_2$ ;

3  $R^2$  is S-acyl;

4  $R^3$  is a member selected from the group consisting of hydroxy and  
acyloxy;

5  $R^4$  is alkyl; and

6 X is  $=O$  .

1 23. A compound in accordance with claim 1 in which:

2  $R^1$  is  $-N(CH_3)_2$ ;

3  $R^2$  is cypionyloxy;

4  $R^3$  is acetoxy;

5  $R^4$  is alkyl; and

6 X is  $=O$  .

1 24. A compound in accordance with claim 1 in which:

2  $R^1$  is  $-N(CH_3)_2$ ;

3  $R^2$  is methoxy;

R<sup>3</sup> is acetoxy;

R<sup>4</sup> is alkyl; and

X is  $=N-OR^5$  .

25. A compound in accordance with claim 1 in which:

R<sup>1</sup> is  $-N(CH_3)_2$ ;

R<sup>2</sup> and R<sup>3</sup> are both acetoxy;

R<sup>4</sup> is alkyl; and

X is  $=N-OR^5$  .

26. A pharmaceutical composition comprising an effective amount of a compound of claim 1 and a pharmaceutically acceptable excipient.

27. A method of producing an antiprogestational effect in a patient, said method comprising administering to said patient an effective amount of a compound of claim 1.

28. A method of inducing menses in a patient, said method comprising administering to said patient an effective amount of a compound of claim 1.

29. A method of treating endometriosis, said method comprising administering to said patient an effective amount of a compound of claim 1.

30. A method of treating dysmenorrhea, said method comprising administering to said patient an effective amount of a compound of claim 1.

31. A method of treating endocrine hormone-dependent tumors, said method comprising administering to said patient an effective amount of a compound of claim 1.

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1 N 32. A method of treating uterine fibroids in a patient, said method  
2 comprising administering to said patient an effective amount of a compound of claim 1.

1 N 33. A method of inhibiting uterine endometrial proliferation in a  
2 patient, said method comprising administering to said patient an effective amount of a  
3 compound of claim 1.

1 N 34. A method of inducing labor, said method comprising  
2 administering to a patient an effective amount of a compound of claim 1.

1 N 35. A method of contraception, said method comprising administering  
2 to a patient an effective amount of a compound of claim 1.

1 N 36. A method of postcoital contraception, said method comprising  
2 administering to a patient an effective amount of a compound of claim 1.

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